REMARKS

Applicant respectfully requests reconsideration in light of the following remarks.

Claims Amendments/Status

Claims 1-19 are currently pending in the present application.

Rejection under 35 U.S.C. §102

Claims 1-19 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,804,532 ("Moon"). This rejection is traversed for the reasons presented below.

Independent claim 1 is presented herein below for the Examiner's convenience of reading.

> 1. A mode switching method of a multi-mode multi-band mobile communication terminal in a multi-access communication network, the multi-mode multi-band mobile communication terminal having modems for communication with a plurality of communication networks having different coverages, comprising:
> the first step of calculating link quality of a Wireless Local Area Network (WLAN) in which the mobile communication terminal is currently located;
> the second step of comparing the link quality calculated at the first step with a first reference value preset in connection with the WLAN;
> the third step of measuring a signal from a portable Internet having coverage wider than that of the current communication network if, as a result of the comparing at the second step, it is determined that the link quality of the WLAN is lower than the first reference value;
> the fourth step of calculating link quality of the portable Internet; and
> the fifth step of switching a mode of the mobile communication terminal to perform handoff to the portable Internet if it is determined that the link quality of the portable Internet calculated at the fourth step is higher than a second reference value.

As such, independent claim 1 recites, among other things,

(i) measuring a signal from a portable Internet if the link quality of *the WLAN* is lower than the *first* reference value; and

(ii) switching a mode of the mobile communication terminal to perform handoff to the portable Internet if the link quality of *the portable Internet* is higher than a *second* reference value.

According to the claimed invention, for instance, a handoff from a primary network (e.g., a WLAN) to a secondary network (a portable Internet network) that has a larger coverage area than the primary network can be performed even if the link quality of the secondary network is lower than that of the primary network as long as the link quality of the secondary network is higher than a secondary reference value. Thus, by setting the first and second reference value appropriately, the secondary network having a larger coverage area can be chosen even if the link quality of the secondary network is slightly lower than that of the primary network, thereby establishing a more flexible handoff scheme. In addition, for instance, when a user moves away from a WLAN area, a handoff from the WLAN area to a mobile Internet network area can be made quickly because the handoff can take place even when the link quality of the WLAN is still better than that of the mobile Internet network by setting the first and second reference value appropriately.

Moon relates to a system for routing communications based on wireless communication link quality. With respect to Moon, the Examiner asserts on page 3 of the instant Office Action that handoff is performed based on whether or not the *alternative* ling quality is above the high link quality threshold as disclosed in col. 13, line 14 – 57 and Figs. 4 and 5 of Moon. However, the Examiner's assertion is incorrect for the following reasons.

Referring to Fig. 5, Moon shows that at steps 182, 184, and 186, if the link quality of the *primary* communication link is below a high quality threshold, alternative communication links are established. Also, at steps 188 and 196, if the link quality of the *primary* communication link is below a low quality threshold, a handoff to an alternative communication link is made. When the link quality is between the high quality threshold and the low quality threshold, the steps 190, 186, and 188 are repeated (see also col. 13, line 14 – col. 14, line 26).

In other words, the handoff scheme as disclosed in Moon is conducted as the following:

(i) if the link quality of the *primary* communication link < a high quality threshold, alternative communication links are established;

(ii) if the link quality of the *primary* communication link < a low quality threshold, a handoff to an alternative communication link is conducted.

(iii) if a low quality threshold < the link quality of the *primary* communication link < the high quality threshold, the steps 190, 186, and 188 are repeated

Thus, in Moon, the decision to perform handoff only involves the link quality of the primary communication link, and whether the link quality of an *alternative* communication link is below either the high or low quality threshold does not affect the decision. According to the handoff scheme of Moon, for example, when a user is moves away from a primary network area to a secondary network area, handoff may be delayed because the link quality of the primary network is compared with the high quality threshold at least twice (at steps 182 and 190). Also, the link quality of the alternative network does not affect the decision to perform handoff, and the handoff scheme of Moon is considered to be inflexible compared to the claimed invention. As such, Moon fails to show or suggest all the features of independent claim 1.

Further, independent claim 7 is presented herein below:

> 7. A mode switching method of a multi-mode multi-band mobile communication terminal in a multi-access communication network, the multi-mode multi-band mobile communication terminal having modems for communication with a plurality of communication networks having different coverages, comprising:
>
> the first step of measuring a signal from a WLAN having coverage narrower than that of *a portable Internet in which the mobile communication terminal is currently located*;
>
> the second step of calculating link quality of the WLAN signal measured at the first step;
>
> the third step of comparing the link quality of the WLAN signal measured at the second step with a preset first reference value; and
>
> the fourth step of switching a mode of the mobile communication terminal to perform handoff to the WLAN if, as a result of the comparing at the third step, the link quality of the WLAN is higher than the first reference value, *regardless of whether or not link quality of the portable Internet is higher than the first reference value* (emphasis added).

According to the claimed invention, for example, a handoff may be performed depending upon the link quality of an alternative network (e.g., a WLAN), regardless of that of the primary network (e.g., a portable Internet network).

Moon describes with reference to Fig. 5 that a handoff is made from the primary communication link to an alternative communication link. As discussed above, however, Moon merely discloses that handoff is performed only depending upon the link quality of the primary communication link. The link quality of alternative communication links is not compared with either the high or low quality threshold. Thus, Moon is unrelated to receiving a signal from a WLAN having coverage narrower than that of a portable Internet network and performing handoff to the WLAN if the link quality of the WLAN is higher than a first reference value. As such, Moon fails to show or teach all the features of independent claim 7.

In addition, independent claim 14 is presented herein below:

> 14. A mode switching method of a multi-mode multi-band mobile communication terminal in a multi-access communication network, the multi-mode multi-band mobile communication terminal having modems for communication with a plurality of communication networks having different coverages, comprising:
> the first step of measuring a signal from a WLAN having coverage narrower than that of a mobile communication network in which the mobile communication terminal is currently located;
> the second step of calculating link quality of the WLAN signal measured at the first step;
> the third step of comparing the link quality of the *WLAN signal* measured at the second step with *a preset first reference value*;
> the fourth step of measuring a signal from a portable Internet if, as a result of the comparing at the third step, the link quality of the WLAN is not higher than a first reference value;
> the fifth step of measuring link quality of the portable Internet signal measured at the fourth step; and
> the sixth step of switching a mode of the mobile communication terminal to perform handoff to the portable Internet if the link quality of the *portable Internet* calculated at the fifth step is higher than *a second reference value*.

According to the claimed invention, for instance, handoff from a mobile communication network (i.e., the primary link) to a portable Internet network (i.e., the secondary link) is performed if the link quality of the portable Internet calculated at the fifth step is higher than a second reference value. As discussed above, Moon merely describes that handoff is performed only depending on whether the link quality of the *primary* communication link is above or below the high and low quality threshold. As such, Moon fails to show or teach all the features of

independent claim 14.

In view of the above, independent claims 1, 7, and 14 are patentable over Moon. Also, the respective dependent claims are allowable for at least the same reasons set forth with respect to independent claims 1, 7, and 14. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

All objections and rejections having been addressed, it is respectfully submitted that the present application should be in condition for allowance and a Notice to that effect is earnestly solicited. Early issuance of a Notice of Allowance is courteously solicited.

The Examiner is invited to telephone the undersigned, Applicants' attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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Date: October 16, 2009